

ASSIGNMENT 2

Textbook Assignment: "Satellites and Antennas," chapter 2, pages 2-1 through 2-31.

- 2-1. What is the reason for the development of the satellite communication (SATCOM) system?
1. Provides a long range, jam-proof communication system
 2. Fulfills the military requirements for reliable, high-capacity, secure and cost-effective telecommunications
 3. Is line-of-sight and EMCON proof
 4. Replaces all baseband frequencies during HERO and AUTOCAT
- 2-2. Satellites provide an alternative to which of the following facilities?
1. Fixed ground installations
 2. Airborne command posts
 3. GPS
 4. AMCC vans
- 2-3. What antenna is used with the AN/WSC-3 transceiver and is employed primarily onboard ships?
1. AN/SSR-1
 2. OE-82C/WSC-1(V)
 3. Whip
 4. Quarter-wave
- 2-4. Where is the OE-82/WSC-1(V) mounted?
1. Main stack
 2. Fore mast
 3. On a pedestal
 4. To the skin of the ship
- 2-5. What is the receiving frequency band for the OE-82C/WSC-1(V)?
1. 248 - 272 MHz
 2. 275 - 300 MHz
 3. 310 - 315 MHz
 4. 2 - 4 GHz
- 2-6. What is the total number of AS-2815/SSR-1 antennas in an AN/SRR-1 receiver system?
1. One
 2. Two
 3. Three
 4. Four
- 2-7. The AS-2815/SSR-1 antennas employed in the 240 to 315 MHz frequency range are utilized to receive what type of broadcasts?
1. CUDIXS
 2. Common Channel
 3. FFN
 4. Fleet
- 2-8. What is the physical size of the newer satellite parabolic antennas?
1. 6 in
 2. 8 in
 3. 12 in
 4. 18 in
- 2-9. Name the three types of U.S. Navy communications satellites.
1. MARISAT, RCA, and ATT
 2. GAFILLER, FLTSATCOM, and LEASAT
 3. ORION, EROS and ZEUS
 4. DANTES, ORION, and HERMES

- 1-10. What type of orbits do U.S. Navy satellites use?
1. Geostationary
 2. Geosynchronous
 3. Polar
 4. Random
- 2-11. MARISAT channels were broken down into three UHF channels, two narrowband channels, and what total number of wideband channels?
1. One
 2. Five
 3. Three
 4. Six
- 2-12. The 500-kHz band GAPFILLER satellites provide what number of 75 baud ship-shore communications channels?
1. 15
 2. 20
 3. 35
 4. 50
- 2-13. What does the UHF receiver separate on the GAPFILLER satellite?
1. The receiver and transmitter band
 2. Intermediate frequencies and low frequencies
 3. Secure voice and non-secure voice channels
 4. Red and Black channels
- 2-14. What are the FLTSATCOM satellites' longitudinal positions?
1. 95° W, 65° E and 150° E
 2. 25° E, 35° W, 05° N and 55° E
 3. 100° W, 72.5° E, 23° W, and 172° E
 4. 22° W, 152° E, 06° E, and 21° N
- 2-15. What is the maximum RF-channel capability on the FLTSATCOM satellite?
1. 10
 2. 15
 3. 23
 4. 35
- 2-16. On the FLTSATCOM satellite, channel 1 of the 25-kHz channels is used for what purpose?
1. Timing
 2. Fleet broadcast
 3. Weather
 4. DSN
- 2-17. What is the position of the LANT (L-1) LEASAT?
1. 15° W
 2. 105° W
 3. 72.5° E
 4. 53° E
- 2-18. Each LEASAT provides what total number of (a) communications channels and (b) transmitters?
1. (a) 10 (b) 4
 2. (a) 11 (b) 6
 3. (a) 13 (b) 9
 4. (a) 15 (b) 11
- 2-19. One of the UHF downlink channels is used for the Fleet Satellite Broadcast downlink. What is its frequency?
1. 10 kHz
 2. 15 kHz
 3. 20 kHz
 4. 25 kHz

- 2-20. AN/WSC-6(V)4 terminals will replace which of the following terminals on aircraft carriers?
1. TADIX
 2. QUICKSAT
 3. SUBSAT
 4. FSC-78
- 2-21. What are the two types of satellites?
1. Active and passive
 2. Passive and module
 3. Active and repeater
 4. Repeater and passive
- 2-22. An active satellite and two Earth terminals is considered what type of operational link?
1. Standard
 2. Optimal
 3. Universal
 4. Typical
- 2-23. Normally, a satellite's orbit is elliptical or circular, while its incline is polar, equatorial, or which of the following?
1. Angle
 2. Attitude
 3. Inclined
 4. Slant
- 2-24. A satellite communications system includes installed communications receivers and transmitters and what other components?
1. Two Earth terminals ready to transmit and receive satellite signals
 2. Two Earth terminals equipped with receiver and satellite transceivers
 3. Three Earth terminals, two with receivers and one with transceivers
 4. Three Earth terminals, one with receivers and two with UHF transmitters
- 2-25. What does a narrow uplink transmission beamwidth provide the capability to do?
1. High intercept problems (HIP)
 2. Low probability of intercept (LPI)
 3. High detection rates (HDR)
 4. Exploitation, detection, and location (EDL)
- 2-26. An HPA or MPA, LNA, up and down converters, and a frequency standard are known by what name?
1. Power group
 2. Digital set
 3. Binary set
 4. Radio group
- 2-27. What is the Navy's standard SATCOM broadcast receiver system?
1. AN/FSC-79
 2. AN/SSR-1
 3. CV-123
 4. ARC-143B

- 2-28. Communications subsystems and satellites are interfaces using which of the following equipments?
1. AM-6534
 2. TD-1063
 3. AN/FSC-79
 4. CV-123
- 2-29. What is the operating bandwidth of the AN/FSC-79?
1. 7 to 8 GHz
 2. 9 to 11 GHz
 3. 10 to 12 GHz
 4. 11 to 15 GHz
- 2-30. In what mode of operation is the AN/WSC-3 when it uplinks in the 292.2- to 311.6 MHz bandwidth and downlinks in the 248.5- to 270.1 MHz band?
1. TDM
 2. Fleet communication
 3. SATCOM
 4. Remote
- 2-31. The AN/ARC-143 UHF Transceiver, used for ASWIXS communications, has how many parts?
1. Five
 2. Two
 3. Three
 4. Four
- 2-32. What type of system provides communications links, via satellite, between mobile units and shore commands?
1. FLTSATCOM
 2. LEASAT
 3. NOVEMBER
 4. DELTA
- 2-33. What is used as the interface between CUDIXS (shore-based) and the Fleet Broadcast System?
1. SNAP IIII
 2. NAVMACS
 3. GLOBAL HICOM
 4. DAMA
- 2-34. SSIXS is used to transmit and receive message traffic between what two types of users?
1. VP aircraft and ASCOMMs
 2. Fleet Marine Forces and attack helos
 3. SSN/SSBN submarines and shore stations
 4. SSN/SSBN submarines and Battle Group commanders
- 2-35. ASWIXS is used as a communications link between ASW planes during operations and what other type of commands?
1. Shore stations
 2. Battle Group commanders
 3. Positioning aircraft
 4. SPECOMMs
- 2-36. The subsystem that expedites status reporting and management of the FLTSATCOM system assets is called what?
1. TACINTEL
 2. NECOS
 3. Control
 4. Fleet Flash Net

- 2-37. DAMA was developed for what purpose?
1. To break out the secure voice circuit from all other transmissions
 2. To remove all residue traces that allow for jamming
 3. To fully automate and link data systems with the net
 4. To multiplex several subsystems onto one satellite channel
- 2-38. What other multiplexing method, if any, does the Navy utilize besides frequency-division?
1. Time-division
 2. Shift-division
 3. Split time-division
 4. None
- 2-39. When HERO condition and EMCON restrictions are set, what are the radio frequencies (RFs) that are prohibited from use?
1. 2 - 3 GHz
 2. Below 30 MHz
 3. 300 - 2568 kHz
 4. Above 3000 kHz
- 2-40. Who are the major participants on the FFN?
1. Senior operational staffs only
 2. Senior operational staffs and designated subscribers
 3. NATO and CINCs only
 4. The Joint Chiefs of Staff and their Force Commanders
- 2-41. An antenna can both transmit and receive energy. This ability is known by what term?
1. Reciprocity
 2. Feed point
 3. Transducance
 4. Stagnation
- 2-42. The point on an antenna where the RF cable is attached is called what?
1. Focal point
 2. Dummy point
 3. Feed point
 4. Center point
- 2-43. What type of antenna radiates efficiently in only one direction?
1. Bidirectional
 2. Omnidirectional
 3. Polarized
 4. Unidirectional
- 2-44. What is the "perfect" SWR that can be theoretically achieved?
1. One-to-one
 2. Two-to-one
 3. Three-to-one
 4. Four-to-one
- 2-45. Energy reflected back to the feed point is known by which of the following terms?
1. Impedance point
 2. Reflected waves
 3. Oscillation point
 4. Deflected waves
- 2-46. Electromagnetic waves travel in free space at what rate?
1. 1,324,000 miles per second
 2. 946,000 miles per second
 3. 518,000 miles per second
 4. 186,000 miles per second

- 2-47. Antennas are referred to in lengths. There is full quarter, and what other length?
1. Half
 2. Eighth
 3. Third
 4. Sixteenth
- 2-48. Wire rope (fan) antennas are used for what range of frequency coverage?
1. 30 kHz to 299 kHz
 2. 300 kHz to 30 MHz
 3. 2 - 20 GHz
 4. 3 - 30 kHz
- 2-49. The conical monopole antenna is used in what type of communications?
1. LF
 2. MF
 3. HF
 4. VHF
- 2-50. The AN/SRA-12 allows for what total number of RF channels in the 14-kHz to 32-MHz range?
1. Five
 2. Two
 3. Seven
 4. Four
- 2-51. What is/are the objectives of tuning an antenna?
1. Tune out impedances and match length to frequency radiated
 2. Physically or mechanically move the antenna
 3. Exhibit and multiplex its impedance
 4. Clean up the wave generation and use wave propagation
- 2-52. Which Navy standards, if any, have control over the safety of personnel going aloft?
1. NAVSAFCEN instructions
 2. NAVOSH requirements
 3. MILSTDs
 4. None

